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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/586,827	07/20/2006	John R. Briggs	62779A	5384
35503	7590	12/27/2007	EXAMINER	
Union Carbide Chemicals and Plastics Technology Corporation P.O. Box 1967 Midland, MI 48641-1967			LU, C CAIXIA	
		ART UNIT	PAPER NUMBER	
		1796		
		MAIL DATE	DELIVERY MODE	
		12/27/2007	PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/586,827	BRIGGS ET AL.	
	Examiner	Art Unit	
	Caixia Lu	1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 12 November 2007.

2a) This action is **FINAL**. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 7-13 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) Claim(s) _____ is/are allowed.
6) Claim(s) 7-13 is/are rejected.
7) Claim(s) _____ is/are objected to.
8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.

 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. ____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) Notice of References Cited (PTO-892)
2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date
4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ .
5) Notice of Informal Patent Application
6) Other:

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Group II in the reply filed on November 12, 2007 is acknowledged.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 7-9 and 11-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reagen et al. (US 5,814,575).

Reagen disclosed an oligomerization process in the presence of catalyst composition comprising chromium amide prepared by reacting a chromium compound and a metal amide, a trialkyl aluminum compound, and a aluminum phosphate support (col. 1, line 64 to col. 2, line 10; col. 2, lines 19-67; col. 7, lines 8-23; and cols. 50-55, Examples 2011, 2012, 4003 and 4004). When the metal amide such as lithium diisopropylamide, lithium dicyclohexylamide, or sodium bis(trimethylsilyl)amide is used in the ethylene trimerization process as shown in Examples 4003 and 4004, Reagan's catalyst composition meet the limitation of the catalyst of the instant claims. It is noted that Reagan does not expressly disclose the oligomer product to have Poisson distribution, however, based on the high percentage of the 1-hexene listed in Table XXVI, one would have expected the oligomer distribution to be Poisson distribution.

Claims 12 requires ethylene is a recycled and claim 13 further requires a second polymerization catalyst. While the indicated limitations are not in the cited prior art, the examiner takes official notice that those limitations is generally known in the art. For example, unreacted ethylene should be recycled for both economical and environmental reasons; and a second catalyst in the reaction media allows copolymerization of the oligomer prepared in situ.

Thus, it would have been obvious to a skilled artisan at the time the invention was made to employ Reagen's teaching to oligomerize olefins in the presence of the aluminum phosphate supported chromium amide catalyst wherein the amide is selected from diisopropylamide, dicyclohexylamide, or bis(trimethylsilyl)amide since such is within the scope of Reagan's disclosure and in the absence of any showing criticality and unexpected results.

Allowable Subject Matter

4. Claim 11 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Reagan does not teach or reasonably suggest the oligomer product with the percentage limitations of the instant claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Caixia Lu whose telephone number is (571) 272-1106. The examiner can normally be reached from 9:00 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful and the matter is urgent, the examiner's supervisor, David Wu, can be reached at (571) 272-1114. The

fax numbers for the organization where this application or proceeding is assigned is (571) 273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-1700.



Caixia Lu, Ph. D.
Primary Examiner